

WHAT IS CLAIMED IS:

1. A method for manufacturing an electron-emitting device, comprising:

5 a step for forming a polymer film between a pair of electrodes formed on a substrate;

a step for giving conductivity to said polymer film by heating; and

10 a step for providing potential difference between said pair of electrodes.

15 2. A method according to claim 1, wherein the step for giving conductivity to said polymer film by heating includes a step for illuminating an electron beam onto at least a part of said polymer film.

20 3. A method according to claim 1, wherein the step for giving conductivity to said polymer film by heating includes a step for illuminating light onto at least a part of said polymer film.

4. A method according to claim 3, wherein the light is light emitted from a xenon lamp as a light source.

25 5. A method according to claim 3, wherein the light is light emitted from a halogen lamp as a light source.

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a step for reducing electrical resistance of said polymer film by heating said polymer film; and

10. A method according to claim 9, wherein the step for reducing electrical resistance of said polymer film by heating said polymer film includes a step for illuminating an electron beam onto at least a part of said polymer film.

11. A method according to claim 9, wherein the step for reducing electrical resistance of said polymer

film by heating said polymer film includes a step for illuminating light onto at least a part of said polymer film.

5           12. A method according to claim 11, wherein the light is light emitted from a xenon lamp as a light source.

10           13. A method according to claim 11, wherein the light is light emitted from a halogen lamp as a light source.

15           14. A method according to claim 11, wherein the light is a laser beam.

20           15. A method according to claim 9, wherein the step for forming a polymer film utilizes an ink jet system.

25           16. A method for manufacturing an electron-emitting device, comprising:

          a step for forming a polymer film between a pair of electrodes formed on a substrate;

          a step for illuminating an electron beam onto at least a part of said polymer film; and

          a step for providing potential difference between said pair of electrodes.

17. A method according to claim 16, wherein the step for illuminating the electron beam onto said polymer film includes a step for giving conductivity to at least a part of said polymer film.

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18. A method according to claim 16, wherein the step for illuminating the electron beam onto said polymer film includes a step for reducing electrical resistance of said polymer film.

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19. A method according to claim 16, wherein said polymer film is an aromatic polymer film.

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20. A method according to claim 16, wherein the step for forming a polymer film utilizes an ink jet system.

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21. A method for manufacturing an electron-emitting device, comprising:

a step for forming a polymer film between a pair of electrodes formed on a substrate;

a step for illuminating light onto at least a part of said polymer film; and

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a step for providing potential difference between said pair of electrodes.

22. A method according to claim 21, wherein the

step for illuminating light onto said polymer film includes a step for giving conductivity to at least a part of said polymer film.

5           23. A method according to claim 21, wherein the step for illuminating light onto said polymer film includes a step for reducing electrical resistance of said polymer film.

10           24. A method according to claim 23, wherein the light is light emitted from a xenon lamp as a light source.

15           25. A method according to claim 23, wherein the light is light emitted from a halogen lamp as a light source.

20           26. A method according to claim 23, wherein the light is a laser beam.

          27. A method according to claim 21, wherein said polymer film is an aromatic polymer film.

25           28. A method according to claim 21, wherein the step for forming a polymer film utilizes an ink jet system.

29. A method for manufacturing an electron source having a plurality of electron-emitting devices, wherein:

5 said electron-emitting device is manufactured in accordance with any one of methods according to claims 1 to 28.

10 30. A method for manufacturing an image-forming apparatus having an electron source including a plurality of electron-emitting devices, and an image-forming member for forming an image by illumination of electron emitted from said electron source, wherein:

15 said electron source is manufactured by a method according to claim 29.